
Joint Mapping Toolkit Visualization (JMTK-V) 3.0.2.5 (for Unified Build 3.0.2.5)

Version Description Document

1. System Overview

The Joint Mapping Toolkit Visualization Component is the DII COE child segment that provides the core mapping capabilities for the DII COE C4I system.

When distributed by NIMA, Joint Mapping Toolkit consists of three logically distinct integrated products:

- Joint Mapping Visual (JMV)
- Joint Mapping Analysis (JMA)
- Joint Mapping Spatial Database (JMS)

This segment consists solely of the visualization component (version 3.0.2.5).

The host computers for the Defense Information Infrastructure (DII) Common Operating Environment (COE) are the Tactical Advanced Computer, version 3/4 (TAC-3/TAC-4) with the HP-UX 10.20 operating system and Sparc 10/20 with Solaris 2.5.1 operating system.

2. Applicable Documents

- Unified Build (UB) 3.0.2.5 System Test Report
(UB3.0.2.5:STR1.0 4/14/97)
- Chart API
 - Chart API 3.0.2 (DII COE SDE-API-CHART-3.0.2 9/30/96)
 - 3.0.2.5 update (See Section 3.1, Inventory of Materials Released)

All user-related documents are being reissued with this software release. See Section 3.1, Inventory of Materials Released, for an itemized list.

3. Version Description

3.1 Inventory of Materials Released

Magnetic media:

Joint Mapping Toolkit Visualization Component Version 3.0.2.5 (Tape Label: JMTK-V 3.0.2.5) for the 3.0.2.5 delivery on a 4mm DAT cartridge intended for:

- TAC-3/TAC-4 hardware environment. This segment can be run on DII COE Kernel Version 3.0.1.0 supporting HP-UX 10.20.

Joint Mapping Toolkit Visualization Component Version 3.0.2.5 (Tape Label: JMTK-V 3.0.2.5) for the 3.0.2.5 delivery on an 8mm EXABYTE cartridge intended for:

- Sparc 10/20 hardware environment. This segment can be run on DII COE Kernel Version 3.0.0.3P2 supporting Solaris Operating System Version 2.5.1.

Documents:

- Chart API 3.0.2.5 Update (DSDE3.0.2.5:Chart 4/14/97)
- Installation Procedures for the Joint Mapping Toolkit Segment (Tape Label: JMTK-V 3.0.2.5) of Unified Build (UB) 3.0.2.5 (JMV3.0.2.5:IP1.0 4/14/97)
- Software User's Manual Joint Mapping Toolkit Visualization Component (2.1.0.0) for Unified Build 3.0.2.5 (JMV3.0.2.5:SUM1.0 4/14/97)
- Joint Mapping Toolkit Visualization (JMTK-V) 3.0.2.5 (for Unified Build 3.0.2.5) Version Description Document (JMV3.0.2.5:VDD1.0 4/14/97)

3.2 Software Changes

The following software trouble reports (STRs) and software change proposals (SCPs) have been implemented in Joint Mapping Toolkit Visualization Component 3.0.2.5.

D70178	Track accuracy precision for overlays and J-UNITS.
Problem:	Presently, lat/long positions for tracks and overlays are stored with extended precision, but this precision is truncated when the units are displayed or transmitted. The USMC has requested that these units be transmitted and displayed in the following format: DDMMSS.TH
Action:	Fixed in 3.0.2.5. Added tenths and hundredths precision to latitude and longitude JUNIT encoding and decoding.
Agency #:	DU00661
INRI #:	30200000634
 D70210	 Mount CD does not work with the HP-UX 10.10 OS.
Problem:	The Option Mount CD does not work with the HP-UX 10.10 OS. When CD is mounted using SAM, the Load ADRG function still does not work.
Action:	Fixed in 3.0.2.5. CD device name changed to accommodate both HP-UX 10.10 and 10.20 OS.
Agency #:	DD00004
INRI #:	30200000616
 DJ00037	 CANCEL option (EXIT button) for Center On Cursor not functioning.
Problem:	The CANCEL option (EXIT button) for the menu item Center On Cursor does not work. This also happens on 2.2.0.5P8. CCB comments/history 9/18/96; UB08863 validated as open in 3.0.2.0 per M Stillings. LCCB 10/2/96: Accepted and awaiting build plan assignment from the CCB.
Action:	Fixed in 3.0.2.5. Correction made to allow user to cancel the Center On function. The cursor returns to the normal mode.
INRI #:	30200000319

DU00005	The color orange does not work in the overlay option.
Problem:	When creating any overlay and selecting the color orange, the system will change the color to white when OK is selected in the Edit Overlay window.
Action:	Fixed in 3.0.2.5.
INRI #:	30200000164
DU00132	Tracks sometimes displayed under existing overlays.
Problem:	Under some circumstances, overlays are plotted on top of tracks, and newly received tracks plot under these overlays, so that an operator may not be aware of a track's existence.
Action:	Fixed in 3.0.2.5. Set MapObjectPriority equal to "1."
INRI #:	30200000552
DU00660	Overlay's symbol list does not contain check point symbol.
Problem:	The symbols pop-up list in the Overlay window does not contain the check point option.
Action:	Fixed in 3.0.2.5. Added check point symbol to pop-up list.
INRI #:	30200000632

30200000107 Active, inactive switches are reversed in overlay polyline and line object windows.

Problem: Active, inactive switches are reversed in overlay polyline and line object windows. The labels are in the same positions as all other object windows' switches but the operation is backwards. When adding an overlay polyline or line object, the status box shows the inactive switch is set to ON. Once the new overlay object is ok'd, the status column in the overlay editor window shows that the overlay is active (opposite of the status box). After the overlay is ok'd and activated, the object that had the switch set to inactive displays and any polyline or line objects that were set to active are not displayed. Those objects that are set to active in the object window have a status of inactive in the status column of the overlay editor window.

Action: Fixed in 3.0.2.5. Active switch now sets polyline to active. Inactive switch now sets polyline to inactive.

30200000145 MODIFY function in Country Colors causes an error. (HP only)

Problem: MODIFY function in Country Colors causes an error. When a country is highlighted in the Country Colors list and MODIFY is selected from the pop-up menu, an error occurs. The error says: "Countries error: No selections have been made. Make a selection and try again". Also occurs in HP301.

Action: Fixed in 3.0.2.5.

30200000270 Split up the JMTK segment so it can run standalone without UB for the DMA.

Problem: The Defense Mapping Agency requires that JMTK be able to run standalone with Unified Build loaded or running. The current JMTK segment has UB-specific functionality. Move this functionality back into UB.

The resultant JMTK binaries should be:

Cartographer*	CenterWidth*	ChartInset*
DMADraw*	DMALoad*	DMASpatial*
DestroyChart*	DrawDTED*	DrawRaster*
DrawVector*	JMTKChart*	KillChart*
KillJMTK*	LoadDTED*	LoadRaster*
MapColorCtl*	MapControl*	MapIntensity*
MapLoad*	Overlays*	Pimtracks*
RPFDraw*	RPFLoad*	RunJMTK*
TacPlot*	TestPolyline*	VEDEdit*
VEDMgr*	VEDMount*	mkmapdir*

Action: Fixed in 3.0.2.5.

30200000406 Selecting "Default" and then "Save" from Country Colors pop-up menu causes "Bus error (core dump)."

Problem: Selecting "Default" and then "Save" from Country Colors pop-up menu causes "Bus error (core dump)." When the operator selects the noted function(s) the Country Colors window closes. ExecMgr shows "received signal 10" for Countries. This occurs no matter if a country's color was modified or not.

Action: Fixed in 3.0.2.5.

30200000667 PostInstall pitfalls.

Problem: We have experienced tricky problems with PostInstalls not taking into account the loading of segments on other disks (e.g., doing a "chmod -R" on /h/<segmentname>), not knowing that "cp -p" does not retain owner/group on Solaris, and not knowing that mountd and/or nfsd might not be running, if nothing is being mounted. This is just a heads-up, and is likely known already.

Action: Corrected by transition to DII COE.

30200000710	View filter TacPlot instability fix.
Problem:	If the user brought up the View Filter window, selected a filter, and clicked APPLY, without the View Window being up at the time, TacPlot would core dump.
Action:	Corrected by transition to DII COE.
30200000729	Map control and hard-coded device for CDROM.
Problem:	Map Control and hard-coded device for CDROM. Status: Might exist in 2.2, desirable for 3.0. Projects: NONE (yet). Discussion: The Map Control executable, and possibly the Map Loader (for ADRG's), appears to assume for HP that the SCSI ID is 4; hence the device appears to be hard coded. HP's on the TAC-4 contract do not have the CDROM set to 4. This number should be configurable in both cases.
Action:	Fixed in 3.0.2.5. Added option to select SCSI ID.
30200000739	When launching ChartInset with -pix option, the chart can be resized larger than desired.
Problem:	The -pix command line argument for ChartInset permits a segment to specify a maximum size for the chart window. The operator is not supposed to resize the chart window larger than the specified size. Currently the chart can be resized to a larger height than specified in the -pix argument.
Action:	Fixed in 3.0.2.5. The chart window can no longer be resized larger than the -pix command line argument specifies.

30200000753	Re-engineer mount/unmount code of all PostInstall/DEINSTALLS to support GCCS multi-/h/data/global mount points.
Problem:	Re-engineer mount/unmount code of all PostInstall/DEINSTALLS (i.e.,UB/Link11/JMTK/JMCIS) to support GCCS multi-/h/data/global mount points. Current mount/unmount code only supports one /h/data/global mount and would cause all segments to fail to install on GCCS systems. Note: New mount /remount logic not present in the PostInstall for Link11 or Link11 Adm.
Action:	Fixed in 3.0.2.5. Corrected problem with mount/unmount in all PostInstalls/DEINSTALLS for UB, Link11, JMTK, JMCIS, Printers, and Link11 Adm.
30200000758	The "Reset Map Server" menu option does not function.
Problem:	The "Reset Map Server" menu option removes the "lock" files (which are created when there are errors loading). This did not work because the script that is run by this menu option is looking for a file at /h/data/local/UB/System/Network/map_host. This file does not exist.
Action:	Fixed in 3.0.2.5. Added logic to shell to handle missing file.
30200000792	TacPlot core dumps using Auto Plot OFF under high Link-11 data input (75+ Link Tracks).
Problem:	TacPlot core dumps using Auto Plot OFF under high Link-11 data input (75+ Link Tracks). Have recreated "ON DEMAND" only on Solaris so far. On HP the CPU usage goes to 80 percent plus, which causes the system to become unusable.
Action:	Fixed in 3.0.2.5. Modified logic to remove timers in Auto-Plot-Off before restarting them.

30200000843 AOU's do not display correctly for LOBs with estimated range.

Problem: When LOB is entered with an estimated range and the AOU is displayed, the displayed AOU continues to reflect a range of 450 NM vice the entered estimated range.

Action: Fixed in 3.0.2.5.

The following STRs were a partial pass.

30200000541 Correct problems with flexible track tags.

Problem: Correct problems with flexible track tags. 1) There was no case for DEST (Track Destination Point), and 2) Length was being retrieved into a string vice an integer for the TLOA (Track Length Overall) case.

Action: Fixed in 3.0.2.5. Added DEST and TLOA cases.

30200000708 New draw modules and map loader/control.

Problem: These new draw modules, map loader, and map control were implemented to: add support for VPF/CADRG/CIB maps, add support for DTED maps in raw format, fix LOS profiles to use the new DTED module, standardize the loading/drawing procedure, provide an MMI for locally/globally available maps (map server concept), and combine the functionality of numerous map windows into a few comprehensive ones.

Action: Corrected by transition to DII COE. Support for DTED maps in raw format and fix for LOS Profile are not implemented.

The following STRs were unable to system test.

30200000401 DEST and TLOA will not display as flexible track tag items for VTS Link track type.

Problem: Destination (DEST) and total length overall (TLOA) fail to display anything for a VTS Link track type when specified as a flexible track tag item in the FlexTrkTags data file. The case DEST is missing and the TLOA value is retrieved incorrectly (wrong type) in the source file FlexTrkTags.c.

Action: Fixed in 3.0.2.5. Added DEST and TLOA cases.

30200000738 Certain VTS fields cannot be updated when trying to set value to zero.

Problem: Tried to do a track reposition of a standard route (VTS) track to the first leg of the route. The track moved, but the last waypoint was not changed. (Previously it was waypoint 4, since moved to first leg, the last waypoint is now supposed to be zero). Traced through code and found the problem in Tdbm/Libs/Tdbm/VtJoinTracks.c. The code does an if(last-way-point) then update. Therefore, if last-way-point is zero, it won't update. Upon further investigation, found the same problem for Speed Override (which is a flag, and zero means speed override OFF), and SR Number (problem if try to change to SR #0).

Action: Fixed in 3.0.2.5. Changed the condition to allow values equal to zero.

4. Impact on Developers

A. If using any API functions, segment developers will be required to recompile and relink on the appropriate platform(s) with the DII COE and API libraries.

B. Bug in COEInstaller

Developers need to be aware of a bug in the COEInstaller, with respect to the environment variable \$INSTALL_DIR. This environment variable is **not** set until **after** the DEINSTALL script has run. Therefore, if developers use the \$INSTALL_DIR variable without setting it up in their DEINSTALL script, the deinstall will fail.

The problem arises if developers use their \$INSTALL_DIR as follows, without the variable being previously initialized:

```
if ($?INSTALL_DIR) then
    setenv XXX_HOME    $INSTALL_DIR
else
    setenv XXX_HOME    /h/XXX
endif
```

When more than one segment is deinstalled at the same time, the \$INSTALL_DIR for the last segment deinstalled is used rather than the home directory of the developer's segment. Therefore, it is necessary to manually set the \$INSTALL_DIR variable in the DEINSTALL script by adding this code at the beginning of the script:

```
unset INSTALL_DIR
set INSTALL_DIR = /h/XXX
```

where XXX = the name of the segment directory